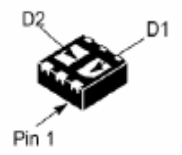
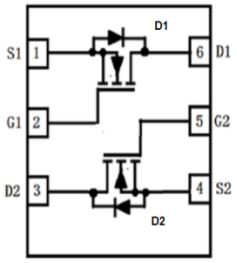
LDN2070DT2AG

20V N-Channel Enhancement-Mode MOSFET



DFN2020-6D



1. FEATURES

- VDS= 20V
- RDS(ON), VGS@4.5V, IDS@2.8A = 60mΩ
- RDS(ON), VGS@2.5V, IDS@2A = 115mΩ
- RDS(ON), VGS@1.8V, IDS@2A = 130mΩ
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LDN2070DT2AG	2DN	4000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Drain–Source Voltage	VDS	20	V
Gate–to–Source Voltage	VGS	±12	V
Continuous Drain Current	ID	2.8	A
Pulsed Drain Current(Note 1)	IDM	12	

1. Repetitive Rating: Pulse width limited by the maximum junction temperature.

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Power Dissipation	PD	1.4	W
Thermal Resistance, Junction–to–Ambient(Note 2)	RΘJA	140	ºC/W
Junction and Storage temperature	TJ,Tstg	−55~+150	°C

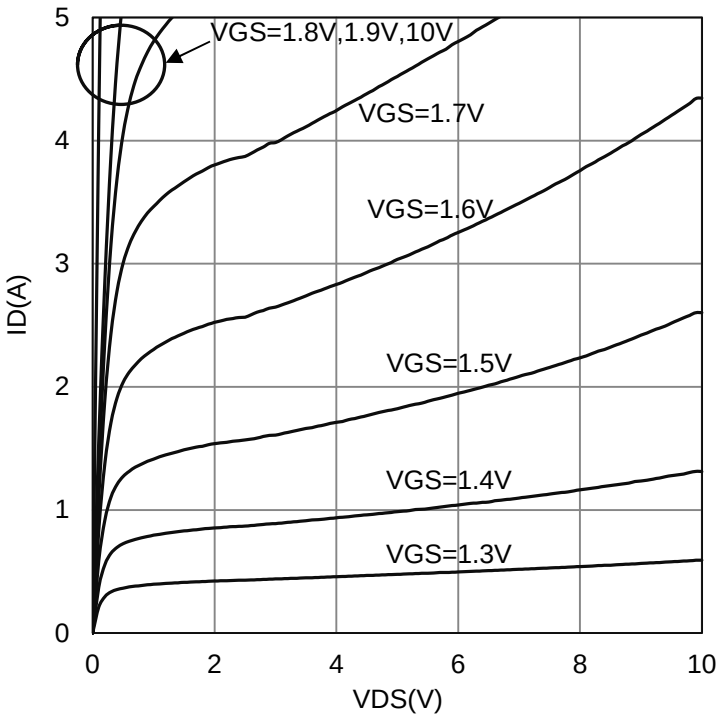
2. 1-in² 2oz Cu PCB board.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

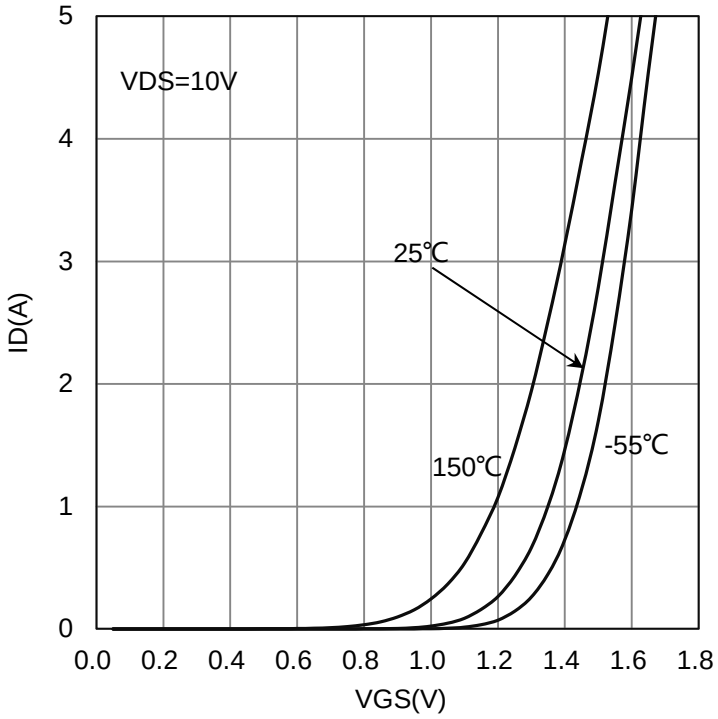
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain–Source Breakdown Voltage (VGS = 0, ID = 250μA)		V(BR)DSS	20	-	-	V
Zero Gate Voltage Drain Current (VDS = 20V, VGS = 0V)		IDSS	-	-	1	μA
Gate-Source Threshold Voltage (VDS = VGS , ID = 250 uA)		VGS(th)	0.60	0.8	1.2	V
Gate–Body Leakage Current (VDS = 0 V, VGS = ±12 V)		IGSS	-	-	±100	nA
Drain-Source On-Resistance Resistance (VGS = 4.5V, ID = 2.8A) (VGS = 2.5V, ID = 2.0A) (VGS = 1.8V, ID = 2.0A)		RDS(on)	- - -	34 44 78	60 115 130	mΩ
DYNAMIC						
Total Gate Charge	(VDS = 10V, ID = 3.6A,VGS = 4.5V)	Qg	-	4.2	-	nC
Gate-Source Charge		Qgs	-	0.78	-	
Gate-Drain Charge		Qgd	-	1	-	
Turn-On Delay Time	(VDD = 15V, RL=5.5Ω,ID = 1A, VGEN = 4.5V,RG = 6Ω)	td(on)	-	13.8	-	ns
Rise Time		tr	-	9.6	-	
Turn-Off Delay Time		td(off)	-	29.8	-	
Fall Time		tf	-	7.2	-	
Input Capacitance	(VDS = 10 V, VGS = 0 V, f = 1 MHz)	Ciss	-	384.7	-	pF
Output Capacitance		Coss	-	51	-	
Reverse Transfer Capacitanc		Crss	-	44	-	
Max. Diode Forward Current		IS	-	-	1.6	A
Diode Forward Voltage (IS = 1.6A, VGS = 0V)		VSD	-	0.76	1.16	V

3.Pulse Test: Pulse Width ≤300 μs, Duty Cycle ≤2.0%.

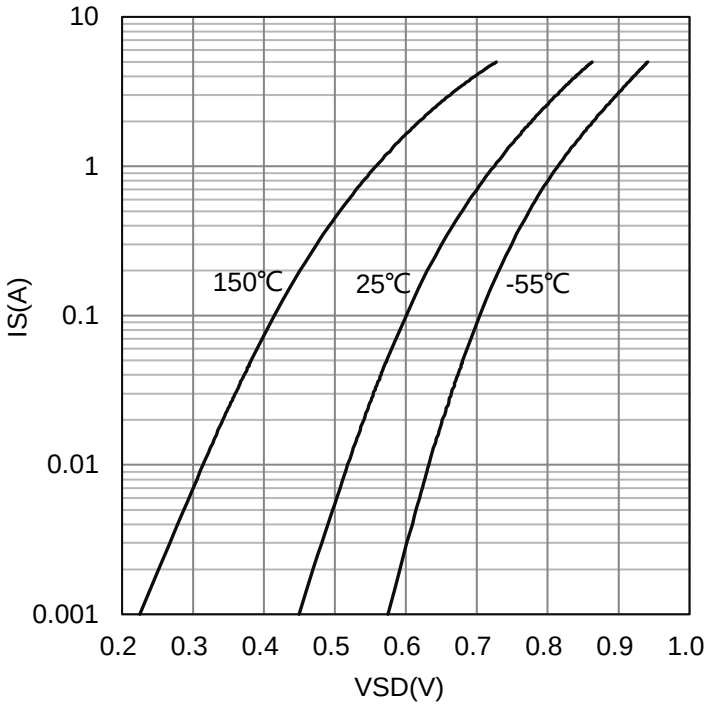
6.ELECTRICAL CHARACTERISTICS CURVES



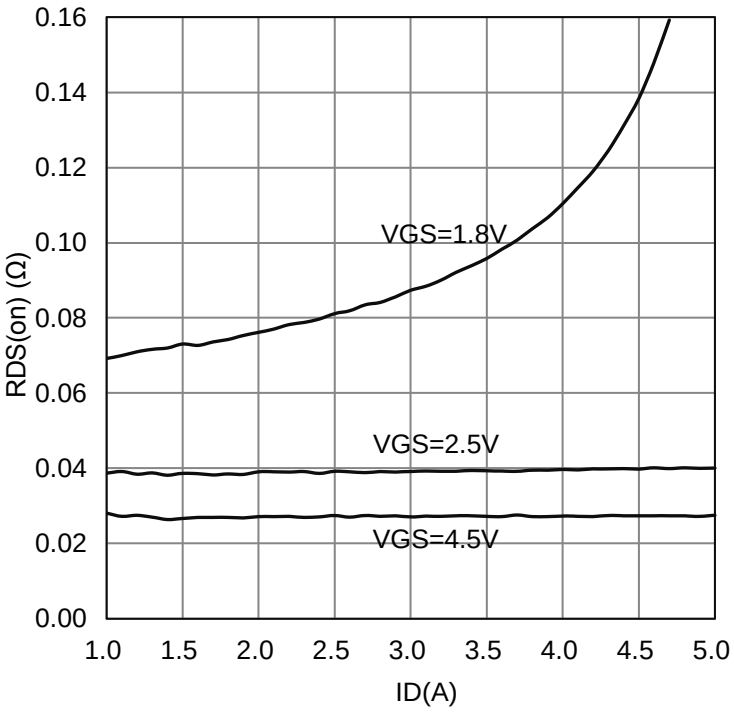
ID vs. VDS



ID vs. VGS

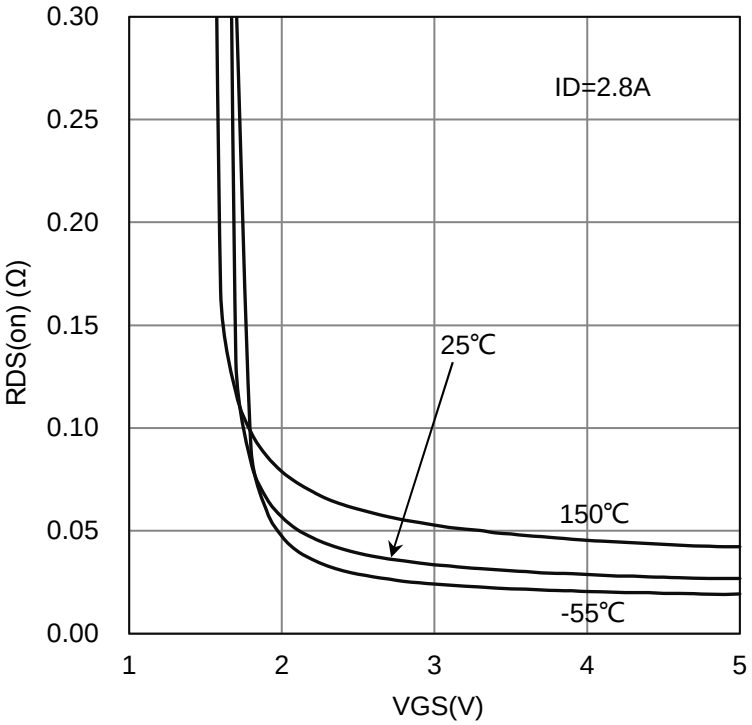


IS vs. VSD

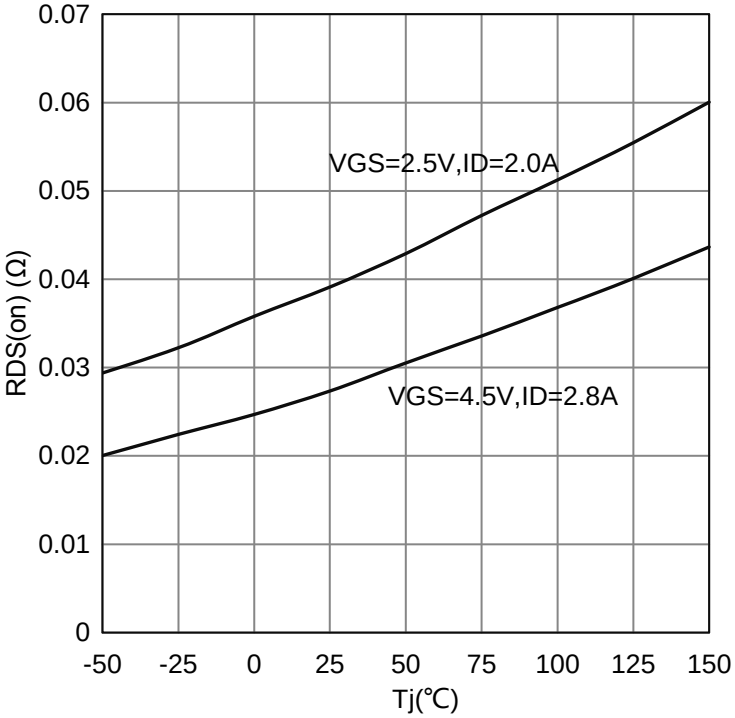


RDS(on) vs. ID

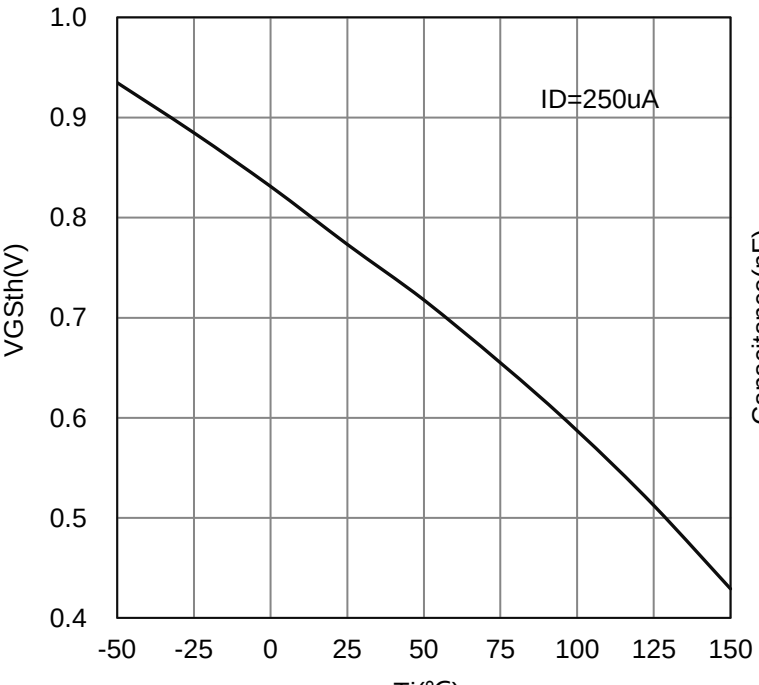
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



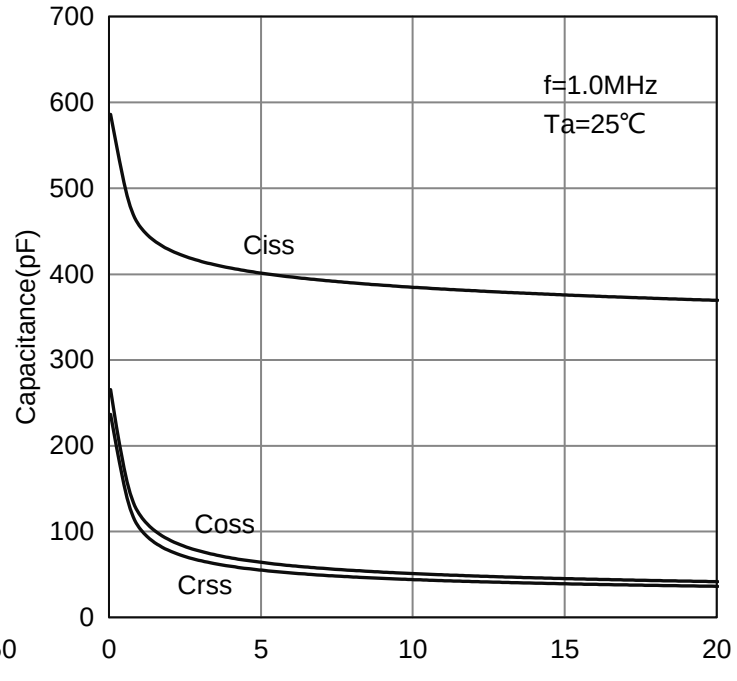
RDS(on) vs. VGS



RDS(on) vs. Tj

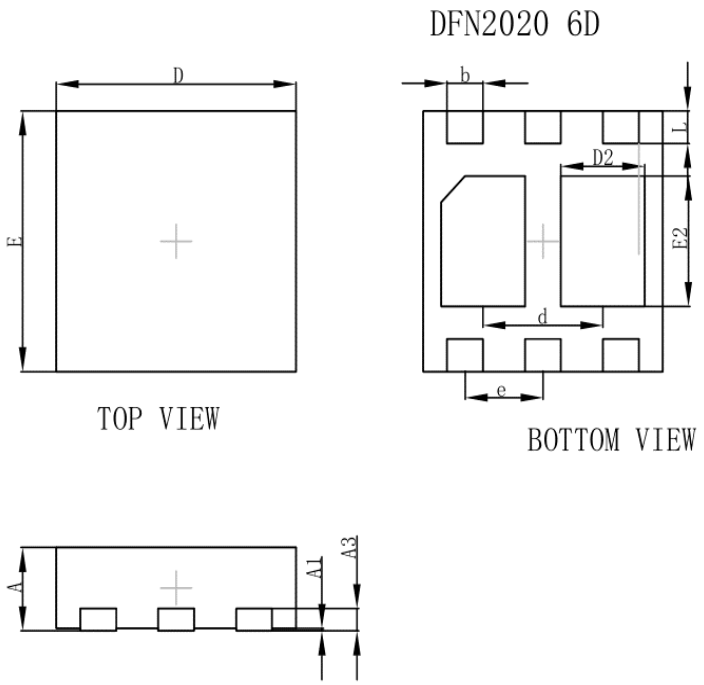


VGSth vs. Tj



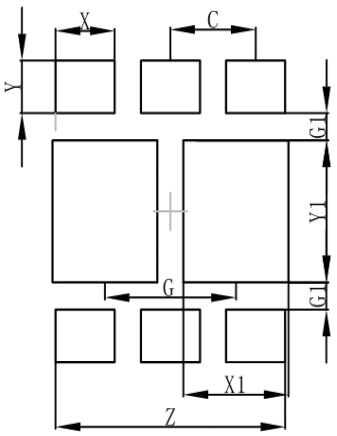
Capacitance

7.OUTLINE AND DIMENSIONS



DFN2020-6D			
Dim	Min	Typ	Max
D	1.95	2.00	2.05
E	1.95	2.00	2.05
e	-	0.65	-
L	0.20	0.25	0.30
b	0.25	0.30	0.35
d	-	1.00	-
A	0.60	0.65	0.70
A1	0.00	0.02	0.05
A3	-	0.152	-
E2	0.95	1.00	1.05
D2	0.65	0.70	0.75
All Dimensions in mm			

8.SOLDERING FOOTPRINT



Dimensions	(mm)
X	0.45
Y	0.37
X1	0.80
Y1	1.00
C	0.65
G	1.00
G1	0.19
Z	1.75